



## CLAIMS

What is claimed is:

1. An integrated music system for use on a computer by a user comprising sub-systems consisting of an Instant Musician sub-system, Instant Recording Artist sub-system and Instant Composer sub-system where the Instant Musician sub-system provides users a means to play musical numbers from a computer by means of a standard computer keyboard and have the notes played on the standard computer keyboard sound like notes played from chosen musical instruments.
2. An integrated music system for use on a computer by a user comprising sub-systems consisting of an Instant Musician sub-system, Instant Recording Artist sub-system and Instant Composer sub-system where the Instant Recording Artist sub-system provides users a means to modify and combine music numbers with modifications including both music amplitude modifications in selected frequency bands and transformations of music sounds in selected music frequency bands to other selected frequency bands.
3. An integrated music system for use on a computer by a user comprising sub-systems consisting of an Instant Musician sub-system, Instant Recording Artist sub-system where the Instant Composer sub-system provides users a means to compose or create new music numbers having both music scores, words and recorded music sounds with such composed music pieces being able to be generated by several different means including inserting notes into blank music scores with a computer mouse or pointing device, or generating notes on music scores by using a mouse or pointing device to delineate places on a computer screen depiction of a selected musical instruments where corresponding notes are to be added, or generating music notes on a score by processing sounds inputted from a microphone or other sound pick up device including sounds made by the user by humming, whistling, singing, musical instrument playing, or by composing new music numbers by modifying music scores of previously recorded music numbers by mouse or other pointing device actions on the displayed music scores of these previously recorded music numbers.

**4.** The Instant Musician system or sub-system as in claim **1**, with said system apparatus comprising:

computer readable program instructions for executing the functions of the Instant Musician sub-system; and

storage means readable by computer readable media for storing a plurality of data sets or databases having all single musical note designations from an all inclusive sample music score covering each possible musical note tied in the database to recorded single musical notes from the actual sounds of all known musical instruments; and

storage means readable by computer readable media for storing a plurality of data sets or databases for a plurality of musical numbers or songs in which classical representations of musical notes and other musical score symbols are related in the database to keys on standard computer keyboards; and

display means for displaying standard computer keyboard keys correlated by the system described in claim **1** to the notes displayed by the system of the music score of a music piece or song selected by the user; and

sound generation means for generating sounds of stored musical note sounds of musical instruments when directed by the system software program in response to user computer keyboard key actions; and

sound pickup means for picking up and recording sounds detected by a microphone or other sound pickup device connected to the system computer.

**5.** The Instant Musician system or sub-system as in claims **1** and **4**, wherein the computer readable program instructions allow displaying words of musical numbers selected from databases of music numbers along with standard computer keyboard keys displayed that produce the sounds of the selected musical instrument sounds.

**6.** The system as in claims **1** and **4**, wherein the correlations between user typed keys on a standard computer keyboard and the musical notes interrupted by the system may be changed by the user.

**7.** The system as in claims **1** and **4**, wherein the musical instrument sounds generated by user keyboard input actions may be changed by the user to the sounds of different musical instruments, like changing the sounds of the computer keys being played from that of the sounds of a piano to the sounds of a flute.

8. The system as in claims 1 and 4, wherein the sounds created by the user from playing a music number from the computer keyboard keys are recorded on computer writeable portable storage devices.

9. The system as in claims 1 and 4, wherein a method of communication with the Internet is included for the purpose of downloading into the computer's memory or storage devices additional musical numbers complete with the correlations between standard keyboard keys and the notes of displayed music scores.

10. Computer readable program instructions containing executable instructions, in accordance with claims 1 and 4, for executing:

a process of selecting a music number to be played by the user via a mouse, other pointing device or standard computer keyboard from a database of stored musical numbers; and a process of selecting a set of specific musical instrument note sounds to be sounded from standard computer keys when depressed from a database of many musical instrument sounds stored in the database; and

a process for accepting user preference inputs on display options pertaining to whether the user prefers having a current musical note window to move over the current musical note to be displayed or whether the user prefers the music score to move on the display with the current music note window fixed in place on the display; and

a process for allowing the user to elect whether a background music beat is to be added to the music sounds created, and a process for selecting the relative volume of a background beat, if chosen.

11. Computer readable program instructions containing executable instructions, in accordance with claim 4, for executing a process of accepting user preference on whether the music number to be played by depressing computer keyboard keys shall be accompanied by the sounds of a second instrument that provides a periodic musical sound, and preferences related to the sound level and pitch of the second musical instrument sounds.

12. The Instant Recording Artist system or sub-system as in claim 2, said system comprising: computer readable program instructions for executing the functions of the Instant Recording Artist sub-system; and

display means for displaying both the frequency/spectrum analyzer functions and the function of frequency transformations of music recordings; and

storage means for storing music numbers being combined and the music number produced by combining and/or modifying music files; and

sound generation means for generating sounds produced by combining and/or modifying music files; and

sound pickup means for picking up and recording sounds detected by a microphone or other sound pickup device connected to the system computer.

13. The system as in claim 2 and 12, wherein frequency transformations of music previously recorded are altered to different frequencies by user settings on the display.

14. The system as in claim 2 and 12, wherein the transformed frequency spectrum of previously recorded music is shown on the display along with the user's input of frequency transformations.

15. Computer readable program instructions containing instructions, in accordance with claims 2 and 12, for executing:

a process of generating combined displays of both the frequency spectrum analyzer and equalizer input by the user for previously recorded music file amplitude modifications in user inputted music frequency bands; and

a process of selecting and combining one or more music numbers previously recorded for combining with or without relative volume modifications and either with or without equalizer actions and either with or without frequency transformations selected by the user; and

a process for generating displays simultaneously for each selected music number showing frequency spectrums of previously recorded music, superimposed equalizer settings selected by the user, user selection of frequency transformation settings, music frequency spectrum amplitudes as a result of equalizer and frequency transformation inputs by the user, relative volume control settings, file names for music being combined, other descriptive labeling, such as, file names, and the depiction of the instrument or other sound generation source used to generate each selected music source; and

a process for saving altered or combined music files in file formats selected by the user.

16. The Instant Composer system or sub-system as in claim 3 comprising:

computer readable program instructions for executing the functions of the Instant Composer sub-system; and

storage means readable by computer readable media for storing a plurality of data sets or databases having all single musical note designations from an all inclusive sample music score covering each possible musical note tied in the database to recorded single musical notes from the actual sounds of all known musical instruments; and

display means for displaying music scores generated by a variety of means including: typing keys on a standard computer keyboard, pointing and clicking on music scores using a mouse or other pointing device, humming, singing, whistling, musical instrument playing or by modification of previously recorded music scores; and

sound generation means for generating sounds of notes generated for music scores using sounds of instruments selected by users; and

sound pickup means for picking up and recording sounds detected by a microphone or other sound pickup device connected to the system computer.

17. Computer readable program instructions containing instructions, in accordance with claims 3 and 16, for executing:
- a process of selecting the manner in which music is to be composed from choices of computer keyboard input and/or mouse or other pointing device input, microphone input of humming, singing, whistling, musical instrument input or other sound input, or music composing by modification of a previously recorded music score; and
  - a process of generating blank music scores for display and a process for inserting selected music time signatures on the display; and
  - a process of generating user preferences for the manner in which music is to be composed and the computer keyboard to music note relationships desired by the user; and
  - a process for enabling the user to select the instrument sounds to be played upon entering notes into a music score displayed or when the user elects to play back segments of the music composed; and
  - a process for generating a display depicting the music instrument selected corresponding to sounds generated during play back time segments; and
  - a process enabling the user to save composed music in file formats of choice; and
  - a process enabling users to select, open and process previously recorded music files complete with the automatic generation of music score displays for the purposes of composing new music numbers by modification of previously recorded music numbers; and

a process of enabling users to enter words to music being composed by use of the computer keyboard or with the assistance of voice recognition software; and  
a process for the user to play back several different time durations of music composed.